Fig. 1a

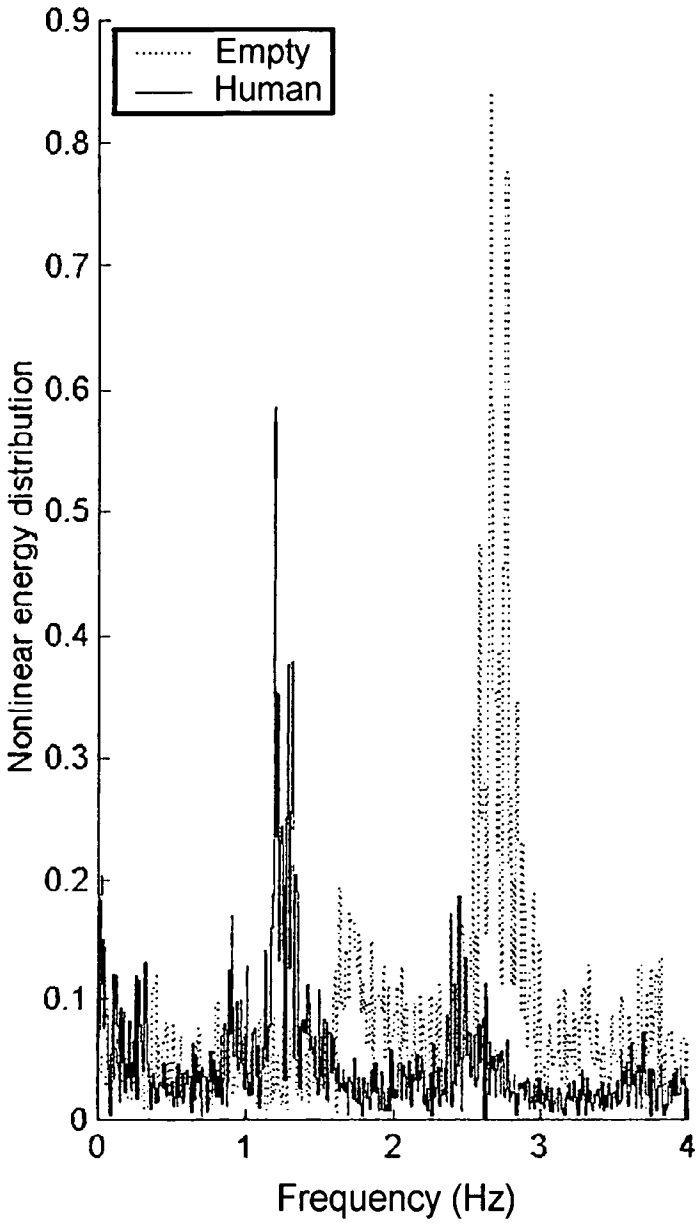

Empty
Human
Nonlinear energy distribution
Frequency (Hz)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
0
1
2
3
4

Fig. 1b

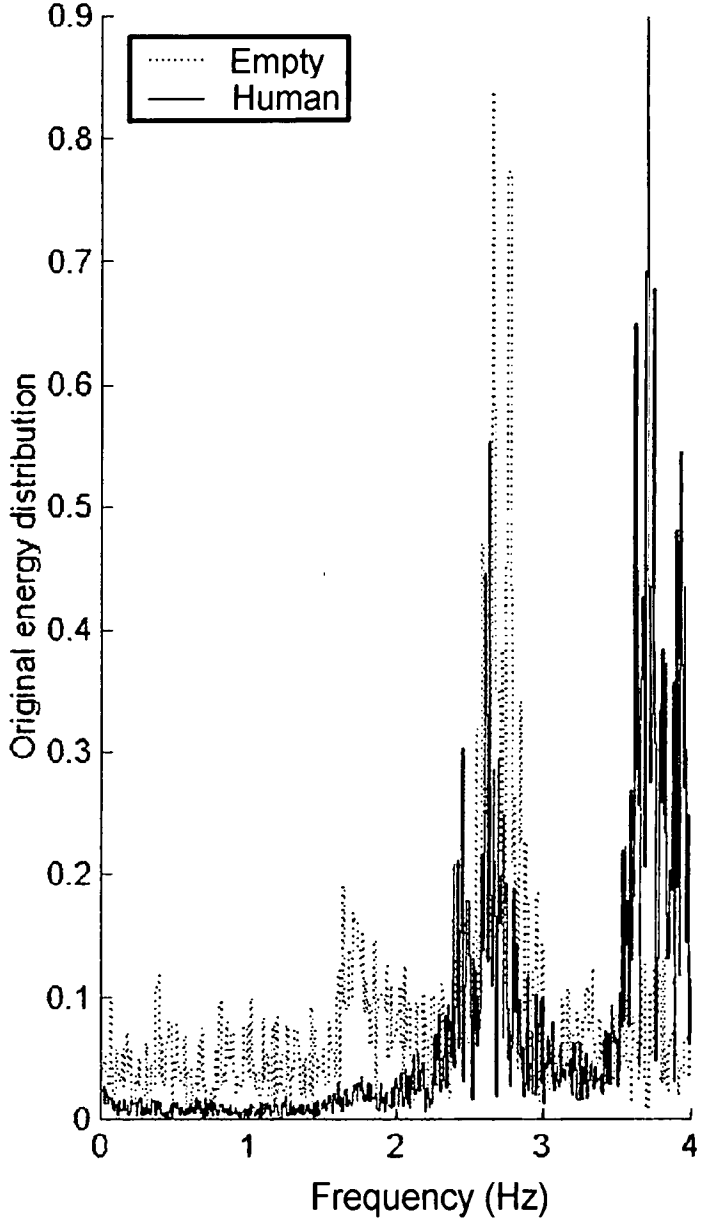

Empty
Human
Original energy distribution
Frequency (Hz)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
0
1
2
3
4

Fig. 2a

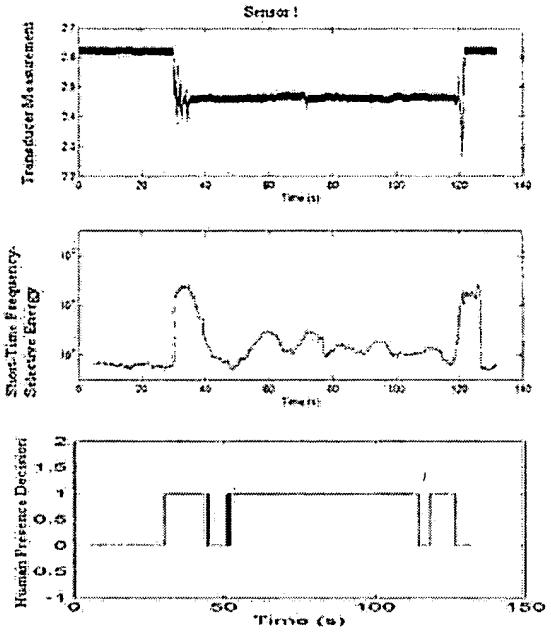


Fig. 2b

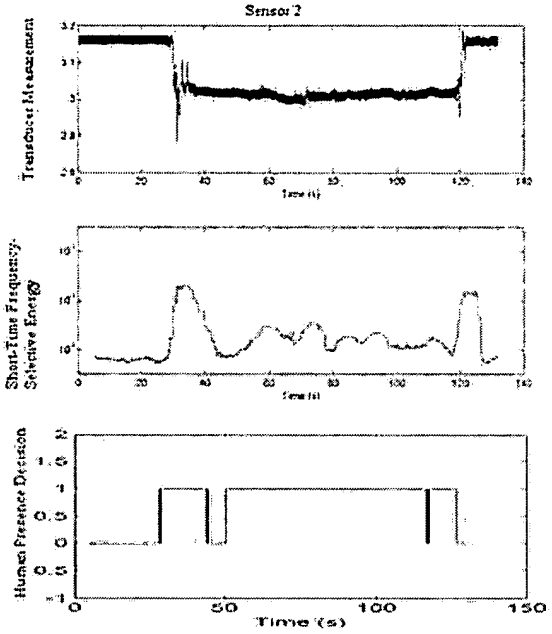


Fig. 2c

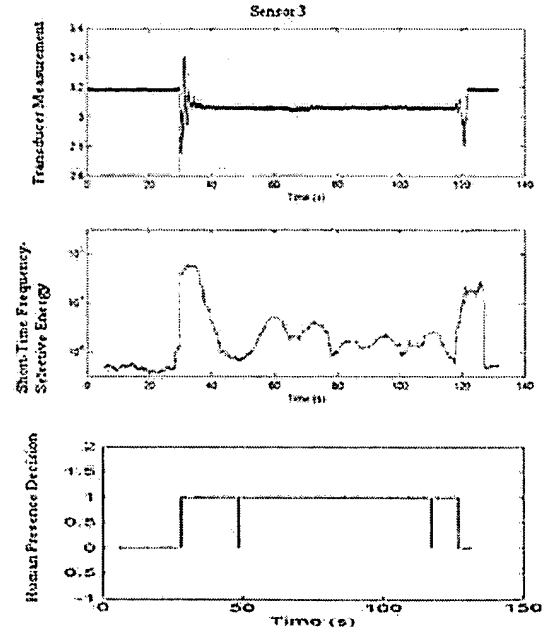


Fig. 2d

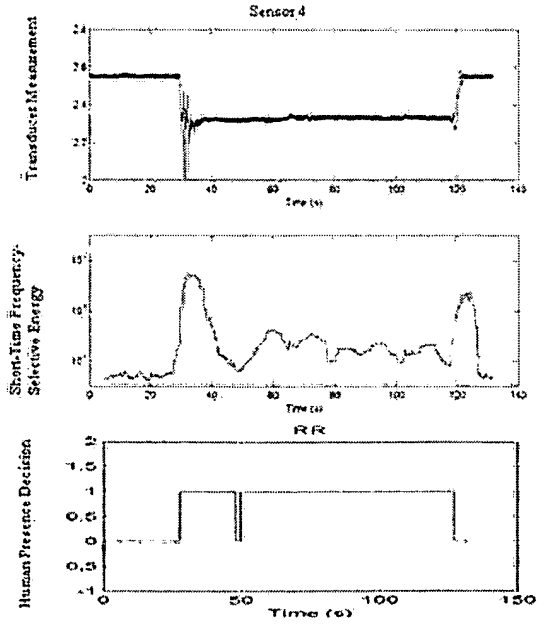


Fig. 3a

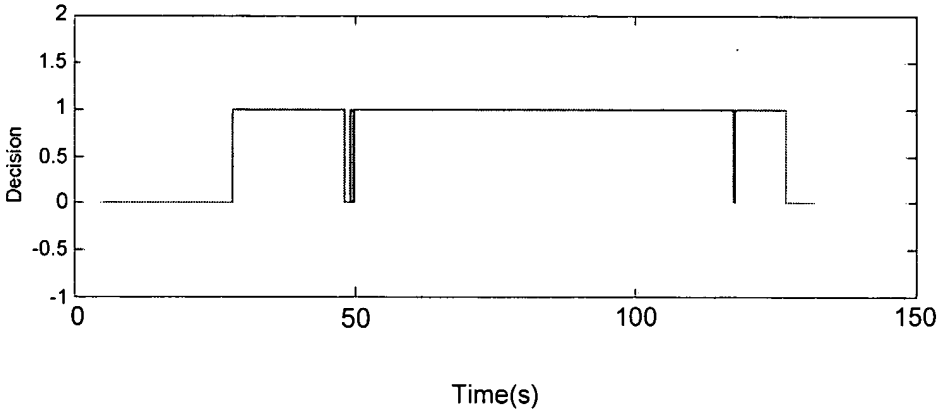

Decision
2
1.5
1
0.5
0
-0.5
-1
0
50
100
150
Time(s)

Fig. 3b

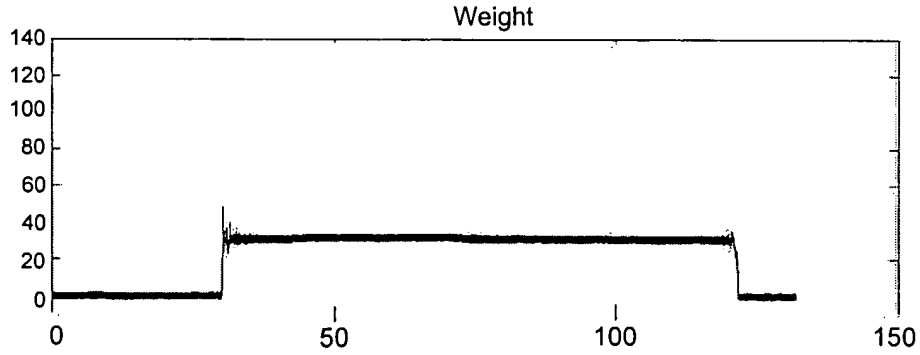

Weight
140
120
100
80
60
40
20
0
0
50
100
150

Fig. 4a

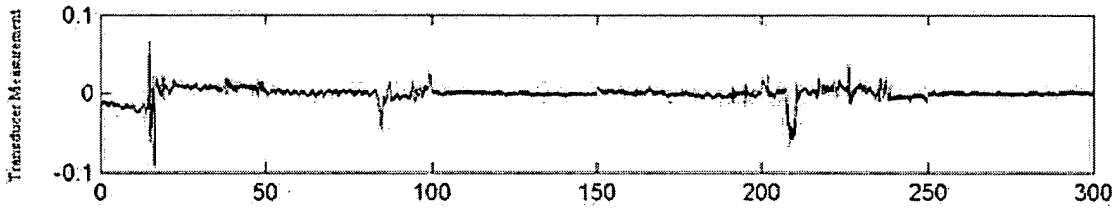


Fig. 4b

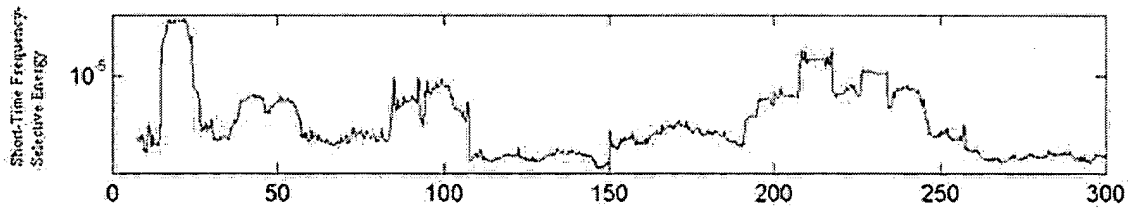


Fig. 4c

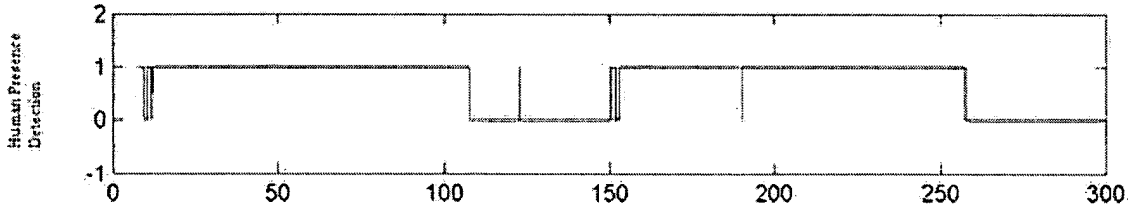


Fig. 4d

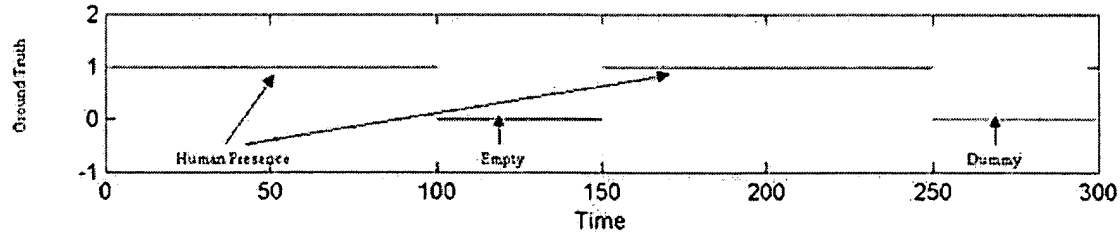
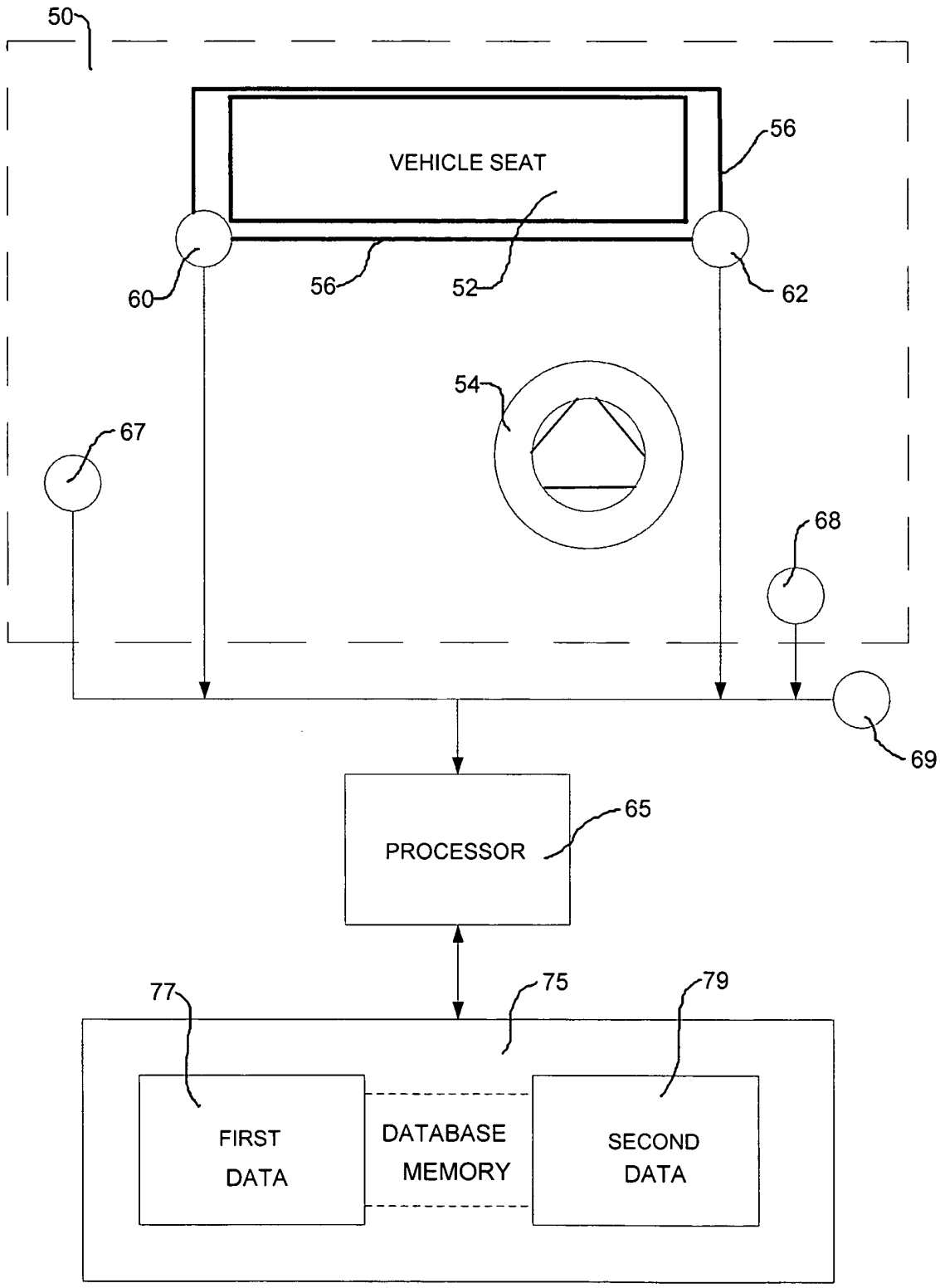


Fig. 5


50
VEHICLE SEAT
56
60
56
52
62
54
67
68
69
PROCESSOR
65
77
75
79
FIRST
DATA
DATABASE
MEMORY
SECOND
DATA